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CHARITY AND THE BEQUEST MOTIVE : EVIDENCE FROM SEVENTEENTH ENTURY WILLS

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Abstract

This paper researches the motivations for charitable bequests by looking at gifts to the poor in the wills of 1357 testators who died in Suffolk, England in the 1620's and 1630's. I find that wealth, religiosity, and the presence of family and friends influence testator generosity. The findings that wealthier, more religious individuals, and those with fewer children give more to the poor support an altruistic model of testator utility. However, the finding that individuals who give to more people outside of their immediate families are more likely to give to the poor contradicts the simple altruism model. This result is shown to be consistent with a model that suggests that charitable giving is partly driven by the approbation friends and families grant charitable behavior.

To the poor of wheresoever it shall please God to call me to him 13s 4d. To the brother minister who preaches a sermon 10s. I make these 2 bequests not for any superstitious ends for they are ever hateful to my soul, but the first I give in testimony of my faith how ready I should have been, the Lord so enabling me, to have given to the poor in true need. The other I make not for any profit to me then a carcase, but for the good of my brethern and sisters then living that they might remember their short and ensuing end. -- John Sharpe of Wickham Skeith, clerk, 1637[1]

By the poore therefore in this place, is understood the poore of the parish where the Testator did dwell and keep house; for it is likely that he did beare a great affection to the poore where he dwelled. -- Swinburne "A Breife Treatise of Testaments and Last Wils," 1635

I. Introduction

Charitable bequests have been and continue to be an important aspect of both charitable giving and bequest behavior. In the United States in 1993, individuals bequeathed a total of $8.2 billion to philanthropic causes (U.S. Bureau of the Census 1994). These gifts represented nearly 7% of the funds going to charitable institutions.

This paper investigates the motivations for charitable bequests by looking at giving behavior in Stuart England. Turning to the Stuart era takes on special meaning in that it was in this period that private charity experienced its first major spurt and many hospitals, universities, and other institutions were first endowed. Total charitable gifts skyrocketed -- giving in the 1620's and 1630's was nearly four times as high as it was at the start of the 1600's. Most of these charitable gifts were donations by testators to "the poor" of their parish. Because of this testator generosity, despite the existence of the Poor Laws

confront two subjects that challenge the assumptions of simple rational economic behavior -- bequests and charitable giving.

Bequests present a dilemma to the economist. If utility is only a function of consumption and is increasing in it, individuals should die with no wealth. However, many individuals die with large estates. This reality has been address by three principal theories; the first theory suggests that bequests are accidental (Hurd 1987), the second theory postulates that bequests are the result of exchange (Bernheim et al. 1985), and the final theory conjectures that bequests are altruistically motivated. Most empirical research on bequests is concerned with testing these three motivations, in particular in testing the altruism model. The advantage of the altruism model is that it yields the testable hypothesis that bequests to children should compensate for earnings differentials. Although some research finds that bequests are at least partially compensatory (Tomes 1981), most studies find scant support for a model of altruistic bequests. Both Menchik (1980) and Wilhelm (1996) find that instead of being compensatory, bequests to children are in most cases equal. While the altruism theory receives little empirical support, the other two theories contradict important aspects of my data. In the first case, while people may accidentally die with wealth, the theory offers no explanation as to why individuals would care enough about the posthumous distribution of their goods to write a will when will writing is neither mandatory nor costless. Similarly, the exchange model provides no explanation as to why individuals would make donations to as nebulous a group as "the poor" who could offer nothing in exchange for the gifts they received. In light of these contradictions, I will postulate an altruistic model of testator behavior.

In contrast to these other studies, I am primarily interested in the motivations for charitable bequests. The seventeenth century data assists in this pursuit in a number of ways. The data set used for this paper provides information about individuals not available in more modern data. Two variables are of particular interest. First, these wills are both wills and testaments; as such, testators bequeath their souls to God before they divide their goods. The testament yields valuable information on religious belief which is a likely correlate of giving behavior. In addition, wills were very diffuse in this period with the average testator leaving gifts to more than four people outside of his immediate family. [2] The measure of how many other people a testator gives to provides some indication of the size of the testator's social circle. An additional advantage of the seventeenth century data is that the estates of individuals who gave money to charity were not granted special treatment. Therefore, I avoid the distortions caused by the tax code in the modern data. The final advantage of investigating motivations for charitable giving using this earlier data set is that charitable gifts were nearly always gifts to "the poor." Because these donations go to individuals rather than institutions, I can easily incorporate these gifts into an altruistic model of behavior (rather than specifying gifts as contributions to a public good as in Amos 1982) and need not worry about differing motivations for gifts to an infinite variety of non-profit institutions.

I specify a utility function that assumes that bequest behavior is motivated by pure altruism. The econometric results are evaluated based on the implications of this model. (Unfortunately, unlike Altonji et al. (1992) the data do not yield a clear test of the altruism model.) While many of the findings are consistent with the altruism model, the finding that

from the desire to receive the approval or avoid the scorn of others as is suggested by Adam Smith (1790) and Becker (1974). While most discussions of such approval benefits have been largely theoretical, this paper provides some empirical support for this type of "warm glow."

Before developing a model of bequest behavior, I discuss the context in which this series of wills was written. Section II describes the condition of the testators, while Section III discusses the state of the poor recipients of their gifts. In Section IV, I specify a model of altruistic testator behavior and derive the implications of the model. The modeling section is followed by an introduction to the wills data set and estimation of the decision to give to the poor in Section V. Section VI concludes.

II. The Act of Will Writing

In primary sources from the period, will writing is viewed as a right rather than an obligation (Swinburne 1635). This right was restricted to men over age 14 and unmarried women over 12. The law of coverture restricted married women's legal rights and their ability to own property rendering the writing of a will both illegal and unnecessary. An investigation into a sample of surviving Suffolk burial records from this period suggests that approximately half of the dying were unable to write wills. Among the dead, 31% were children and 18% were married women and thus unable to write a will, 14% were unmarried women and 37% were adult males and thus able to write a will. (Suffolk Record Office, Bury St. Edmunds 1636-1638). Among those permitted to write wills,

children. Testators could override most aspects of inheritance law with the exception that a widow's right to thirds was protected.[4]

In the seventeenth century, will writing was part of the act of dying and often done during an individual's final illness once the chances of recovery were slim. In my sample, the mean amount of time between the writing of a will and probate was ten months and the median amount of time was two months. This represents an upper bound on the time between will writing and death. Furthermore, in one of the two sets of wills that I use, many scribes recorded whether the testator was sick, weak, or aged. In 53% of these wills, the scribe detailed that the testator was in one or more of these states. This represents a lower bound of the percent who were ill because some scribes may not have mentioned the health status of the testator. In general, testators were extremely close to death. From this vantage point, testators were well aware of what they would have to give away at death. In other words, the size of their estate was known.

The majority of the population was illiterate and among the literate, only a small fraction was able to write well enough to make a legal document such as a will. Therefore, scribes had to be called to the bedside of a dying individual to listen to and to record his wishes. Those who served as scribes included clerks, rectors, surgeons, and other learned individuals (Spufford 1971). In many cases, there was either not enough time to call a scribe or not enough money to pay for the scribe's parchment or other fees. In these circumstances, an individual could speak his wishes to witnesses -- a will made orally rather than in writing is called a *nuncupative* will. For a nuncupative will to be valid, two witnesses would have to repeat to the magistrate the wishes of the dying.

The writing of wills served two purposes. The secondary purpose was for a testator to declare his religious faith and to bequeath his soul to God. Of course, the primary purpose was for a testator to distribute his estate. Testators gave gifts to a surprising range of people including children and spouses, other family members, non-family members, pastors, servants, and the poor. This paper looks at gifts to the poor which were made by approximately 25% of all testators in the sample used. When these gifts were made, they were almost always given to "the poor" of the testator's parish and of other parishes where he owned land. Most testators were probably acquainted with the poor of their parishes because parishes were quite small with the average Suffolk parish containing only 250 inhabitants.[5]

III. The Condition of the Poor

In choosing to give to the poor of the parish, testators were reflecting the state's system of poor support. To fill the vacuum in the care of the poor created by the dissolution of the monasteries during the reign of Henry VIII, the Tudor monarchs enacted a series of statutes culminating in the Poor Law of 1597/1601. The law set up overseers of the poor, mandated that they collect revenues to be distributed to the needy, and made them responsible for setting the able-bodied poor to work and for apprenticing poor children. All of these collections and disbursements were to take place on the parish level; the smallest administrative unit in the country.

Although the law mandated that parish officials tax individuals who owned land or

when the need arose, however, the parishes aimed to support the poor without taxation. In his study of Norfolk poor support, Wales (1984) finds the same phenomenon; large gifts from the gentry and small voluntary contributions from others often made rating unnecessary. The endurance of voluntary giving even in the context of the legal provision of taxation was explained by the overseers of Hanworth: "[I]tt beinge held fitter by our Minister to provide for the Pore rather by voluntary contributions than by rates and collections..." (North Walsham Overseers' Accounts 1621-48 quoted in Wales 1984). The need to rate may have been seen as a Christian failure.

The majority of these voluntary gifts to the poor, 63%, came in the form of charitable bequests (Jordan 1959). The small proportion of the population consisting of the very rich, and particularly of the rich in the merchant class, made a large portion of these donations. However, less wealthy individuals also left money to the poor. It is the bequests of these "middle class" individuals about which this paper is concerned. In the sample used for this paper, I find that donations to the poor were a very small portion of the total liquid wealth bequeathed by the middle class-- about one percent -- and an even smaller proportion of total wealth (because of the value of lands). However, the average individual left a gift of £.80 to the poor when he died and the average giver left £3.3.

To evaluate the magnitude of these gifts in the context of the economy of the poor, I turn to some research on parish level poor support disbursements. In a study of relief in Norfolk, Wales (1984) finds that in the first half of the 17th Century, the normal maximum relief amount was 6d per week or £1.3 a year. Brown (1984) finds that in Aldenham, Hertforshire in the 1670's, a widow with two children received 6s per month or £3.6 a

fraction of their wealth to the poor, the small fraction they did leave was large taken in the context of the labor market and the size of poor support disbursements.

IV. A Model of Weighted Altruism

In much of the research on bequests, an individual determines an optimal bequest by weighing his current consumption against the utility he gains from leaving money to his heirs. In contrast to this research, I assume that the size of the bequest is exogenously determined. This is justified by the small amount of time between will writing and death. Another argument for the exogeneity of the bequest is that in order to write a will a testator needs to know what he is going to distribute. Therefore, he takes the bequest as given when writing his will.

I assume that the dying person carefully distributes his goods because he looks on his world altruistically with concern for the well-being of his spouse, his children, his grandchildren, the rest of his close family, other relatives and friends, and his poor neighbors. I further assume that his concern for these six groups differs across but not within them -- i.e., he cares for all his children equally. I also assert that he views "the poor" as a composite individual and that his intensity of feeling for them is a function of his religiosity. More religious testators place a higher weight on the utility of poor. This leads to the following utility function, subject to the budget constraint that the sum of total bequests must not exceed the testator's wealth:[6]

N_i is the number of people in group i.

c_i, b_i are consumption prior to bequest, and bequest to group or individual i

$f(rel)$ is the weight given to the utility of the poor and W_i is the weight given by the testators to the utility of individuals in group i.

and B is the exogenously determined size of the testator's estate.

I make the following additional assumptions. First, I assume that more religious individuals give a higher weight to the utility of the poor: $f'(rel) > 0$. Second, I assume that the weights the testator gives to the utility of others are non-negative. He is altruistic rather than hateful or envious. Third, I assume that $U(c_i + b_i)$ is a well-behaved utility function with positive and declining marginal utility. Nested in this specification is the assumption that all individuals in each group receive the same bequest and have the same prior consumption. Further, the assumption that bequests and prior consumption enter additively into the utility function implies that individuals are indifferent between consumption financed by bequests and that financed by other sources of wealth.[7]

Maximizing the testator's utility subject to his budget constraint yields first order conditions of the following form:

$$\frac{f(rel_p)}{W_w} = \frac{U'(c_w + b_w)}{U'(c_p + b_p)} \qquad \frac{W_c}{W_w} = \frac{U'(c_w + b_w)}{U'(c_c + b_c)}$$

Gifts are given until every recipient's marginal utility is inversely proportional to the

Inspecting the first order conditions leads to the implication that individuals with lower values of $f(rel)$, which come from lower realizations of religiosity, are expected to give less to the poor, *ceteris paribus*. Also, comparative statics on the first order conditions and implementation of the implicit function theorem, given the assumption that the second derivative of the utility function is negative, lead to the following results[8]:

$$\frac{\partial b_p}{\partial B} > 0, \frac{\partial b_p}{\partial wife} < 0, \frac{\partial b_p}{\partial N_c} < 0, \frac{\partial b_p}{\partial N_g} < 0, \frac{\partial b_p}{\partial N_f} < 0, \frac{\partial b_p}{\partial N_o} < 0$$

Combined, these comparative statics yield a number of testable predictions: bequests to the poor are predicted to be higher for the more religious, the wealthier, the unmarried, and for those with fewer children, grandchildren, close family members, and other relatives and friends.

V. Empirical Analysis of Charitable Bequests

Let your almsgiving match your means. If you have little, do not be ashamed to give the little you can afford -- Tobit 4:8[9]

A. The Data

In order to investigate the implications of the model, I use information from a combination of two samples of 17th century wills: 781 wills from the Archdeaconry of Suffolk that were proven between March 25, 1620 and March 24, 1625, and 576 wills

contains some of the best land in England and was among the first areas to be enclosed. These are the wills of the lesser gentry, yeoman, husbandmen, and laborers. Those who owned land in more than one archdeaconry needed to have their wills recorded and proved elsewhere, so they are not included in the sample (Evans 1993 p. vii-viii), much of the upper gentry was in this group.

As mentioned earlier, most wills were written by scribes. The presence of scribes means that written wills tended to follow a set form. First, the name of the testator, his occupation, parish of residence, and the day the will was written are given. This is followed by a religious preamble that contains a statement of faith. Next comes the disbursement of goods. The section on the division of goods includes mentions of beneficiaries, including the poor, and a description of gifts. Finally the names and marks of witnesses are given. Later, the date the will was declared valid (or proven) was added. Further, it is clear whether the will was written or nuncupative and whether the testator was capable of signing his name in the case of a written will. Nuncupative wills were not as predictable in form as written wills. These wills often lack a religious preamble and focus exclusively on the division of chattel.

Table 1 presents the means of the variables described below for the 1357 testators. Means are given for the whole sample and for the two Archdeaconries separately. There are also indicators as to whether the Suffolk and Sudbury means are significantly different from each other. Five kinds of variables in addition to those measuring gifts to the poor are coded; measures of religious belief, measures of wealth, measures of numbers of beneficiaries given gifts, measures of the circumstances of will writing, and measures of

were for longer and original statements of faith, and fours were reserved for wills with personalized and intense preambles. Nuncupative wills rarely had preambles and therefore no preamble measure is recorded for this group. Second, a dummy variable for the mention of God or religion in the body of the will is coded. This includes allowances for ministers to preach a burial sermon, other donations to men of the cloth or to the church, and concern that children be brought up in the "fear of God."

The size of the testator's estate or wealth is proxied for by a number of variables. First, testator occupations are differentiated into seven occupational categories; yeoman which includes gentlemen, skilled craft workers, shopkeepers, husbandmen, less skilled workers, widows, and those whose occupation is missing from their will. I do not omit those with occupations missing because this group is not random and appears to include both those too old and too young to work. I assume that occupational income follows the order listed above with yeoman as the highest income group and less skilled workers as the lowest income group. The income of testators in the last two categories relative to other categories is ambiguous. The second wealth proxy is derived from the type of will and the nature of the signature. I distinguish among written wills where the testator was able to sign his name and is therefore assumed to be literate, written wills where a testator was unable to sign his name and is therefore assumed to be illiterate, and nuncupative wills. Literate individuals are assumed to be wealthier than illiterate individuals. And, those with written wills are assumed to be wealthier than those with nuncupative wills. The third wealth measure is a dummy variable for whether household servants are mentioned in the will either as beneficiaries or in another context. Having servants is also

given out of land; e.g., I give my son John my freehold land provided that he gives his sister Sarah £50. Such settlements were a standard procedure in England. In this way, total monetary gifts are both a proxy for land value and a sign of liquid assets.[11]

Measures of the numbers of people in different categories who are given gifts in the will are also included. A testator is coded as having a wife if a wife is mentioned in the will. Similarly, the number of children mentioned in the will is measured.[12] Three more categories of people are also added; grandchildren, close family, and other relatives and friends. Close family consists of sons and daughters-in-law, brothers and sisters, and parents. Other relatives and friends consists of godchildren, more distant relatives, and individuals whose connection to the testator is not mentioned.[13]

Two additional variables measure the circumstances in which the will was written. First, I include an indication of whether the testator was in the Suffolk or Sudbury sample. I have no *a priori* reason to expect that individuals in Suffolk and Sudbury would behave differently, but include this indicator because the variable means suggest some disparities between the two samples. I also enter the amount of time between will writing and death in months (and a dummy variable for when this number is missing). Those who write wills earlier may be less likely to give to the poor because they are further from death and may be less worried about their souls. On the other hand, those further from death may give more to the poor because they have more time to think about the distribution of their estate. [14]

The dependent variable, bequests to the poor, has been specified in two ways; as a dummy variable indicating whether the testator made a gift to the poor, and as a measure

of the amount given to the poor. I will focus on the results based on the presence of giving because some testators made in-kind donations which are difficult to value.

B. Basic Model

I propose the following specification as determining the amount of the optimal bequest to the poor:

$$b_p^* = \alpha + \chi religious\ belief + \delta wealth + \phi numbers\ of\ people + \gamma circumstances - \varepsilon$$

which can be rewritten:

$$b_p^* = X'b - e$$

The variables are as described above and e is a normally distributed error term. Recall from Section IV the theoretic predictions that bequests to the poor are expected to be higher for the more religious, the wealthier, the unmarried, and with those with fewer children, grandchildren, family members, and others.

Although the optimal gift to the poor b_p^* may take on a negative value (a testator could potentially improve his utility by taking from the poor and giving to others) he cannot do so in his will. Therefore, the bequest is constrained to be non-negative and the observed bequest is characterized by the following indicator:

$$I = \begin{cases} b_p^* & if\ b_p^* \geq 0 \\ 0 & otherwise \end{cases}$$

One problem with the use of the tobit model is that some individuals left goods rather than money to the poor. These in kind gifts include fuel, food, free rent, and a warming pan amongst others. Although I have estimated the value of these gifts from prices mentioned in other wills, such a task is bound to be imprecise. Jordan had a similar problem and notes that some gifts "defy valuation." (Jordan 1959, p.32) In light of this, I am more confident in the information on whether individuals gave to the poor or not than I am in the measure of the amount given. Under the assumption that I only observe whether the poor were given a gift or not, observed bequests become characterized by the following indicator:

$$Y = \begin{cases} 1 & if\ b_p^* \geq 0 \\ 0 & otherwise \end{cases}$$

where 1 represents that a gift was given to the poor. This implies that

$$E[Y|X] = \Pr[y = 1] = \Phi(X'b)$$

Estimates of b can be obtained from a standard probit estimator.

The results from probit and tobit estimation are presented in Table 2. Number of children, total money given, and the sum of all lands are entered as splines. The probit estimates are presented first because the problem in valuing in kind gifts implies that the probit estimates are more reliable. The first two columns of Table 2 present the coefficients and standard errors from the probit estimation while the third column presents the marginal effects from the probit model evaluated at the sample means. The final two columns of Table 2 present the coefficients and standard errors from the tobit model

more intense preambles were (insignificantly) more likely to give than those with intensity two preambles while those with no preamble were less likely to make a donation. This correlation between religion and charity supports the assumption in the model presented earlier that more religious individuals give more weight to the utility of the poor. However, there are other models with which it also meshes. For example, what if giving to the poor were motivated by a quest for salvation? More religious individuals might give more to the poor because they were more concerned about their souls. In the case of a salvation motive, giving would no longer be viewed as altruistic, but could be captured by traditional economic theories with testators trading off between life-time and posthumous utility. This notion of salvation by good works was contrary to the popular Calvinism of this period where individuals believed that they were saved by grace rather than by good deeds. Notice John Sharpe's emphatic claim in the quote that begins this paper that he is not giving for "superstitious ends" such as salvation (Will 249, Evans 1993). However, even if individuals were told they were saved by grace, it will never be known whether they truly believed that death bed bequests could not help them into heaven. If more religious individuals care more about the poor, or if they were motivated by salvation, approval from God or a need to demonstrate that they were in a state of grace, this correlation between giving and religious belief would be expected.

I have assumed that the two religion variables are capturing the true religious belief of the testator, not merely displayed religious sentiment. The preamble variable might be capturing either the religious sentiments of the scribe or piety feigned for the benefit of heirs or to garner public approval. However, the other religion variable seems immune

induced by extra wealth tapers off significantly. Parcels beyond three and money beyond seventy pounds have no added effect. Further, illiterate individuals are much less likely to give than the literate. Also those with spoken wills are twenty-four percent less likely to give than literate individuals with intensity two preambles. Combined these results support the portrayal of the bequest as an allocation decision. Those who have more to allocate are more likely to give (and to give more) to the poor. However, some of the occupational controls do not behave as expected with most groups other than yeomen more likely to give than skilled craft workers. The coefficient on shopkeepers may arise because shopkeepers were wealthier than skilled craft workers. The coefficients on widows may be induced by the difference between the age of testators in this group; widows were probably older than many other testators. Unfortunately, no record of testator age is given in the will. A lengthy investigation of giving patterns of men and women (Moscow 1997) suggests that sex is not causing the widow result.

The circumstances in which the will was written also influence charitable giving with wills written farther in advance of death more likely to include donations to the poor. This corresponds to the theory that those with more time to think about their distribution were more likely to include the poor. A more unexpected result is that individuals in the Sudbury sample, *ceteris paribus,* were nearly 6% more likely to give to the poor than those in the Suffolk sample. There are three possible explanations for this result. The first explanation is that the economy was different in the 1620's (when the Suffolk testators died) than in the 1630's (when the Sudbury testators died) and either people were growing richer or the poor were growing worse off. This is unlikely because there is no record of

climate, in unobserved wealth or in another manner. This is difficult to resolve although it is more likely that Suffolk had higher unobserved wealth because it was both more fertile (Clark 1995) and has extensive coastline.

I now turn to the results on the variables tabulating numbers of people. Both marital status and numbers of children have the expected negative effects on giving although the former effect is insignificant. Notice that the spline on children suggests that individuals with more than two children were no less likely to give to the poor than individuals with two children. When children are entered separately by sex, the coefficients are negative, significant, and similar in magnitude. In articulating a theory of the distribution of bequests, the clearest prediction is that the presence of children should dampen gifts to the poor. For example, in the exchange model, additional children increase the opportunities for exchange and therefore decrease the need for exchange outside the family. With this in mind, the magnitude of the effect of having additional children on giving is surprisingly small.

One potential factor influencing the effect of additional children on giving is the fact that I have not accounted for inter-vivos transfers. Such transfers were fairly common and both sons and daughters were often given gifts at marriage or on reaching their majority. If most giving to children was inter-vivos, those with children would have lower bequeathable wealth which would in turn lower their gifts to the poor. But, because I am controlling for bequeathable wealth in these regressions, if this were the case, I would find little direct effect of number of children on charitable giving. In addition, if children received inter-vivos gifts, the consumption of children prior to bequest would

apprenticed. I re-run the probit estimator for the 419 testators with minor children. The results are quite different from expected. In this regression, both including and excluding the spline, children have a smaller and insignificant effect on giving to the poor. This suggests that inter-vivos transfers to children do not explain the small magnitude of the effect of children on giving. The drop in the magnitude of the effect of having children on giving for those with minor children probably arises because all 419 individuals in this sub-sample have at least one child and much of the negative effect of children on giving arises from the difference between having no children and having at least one.[15]

The effects of the number of people in the three other groups of people -- grandchildren, close family, and other people are all positive. The first and last of these are significant in the tobit model while the first is borderline insignificant and the last is significant in the probit model. Close family consists 58% of siblings, 7% of parents and 35% of children in law. When these three are entered separately in the regression, none has a significant effect. Others consists 9% of godchildren, 43% of distant relatives, and 48% of those whose relationship to the testator is not mentioned. When these three are entered separately all three are significant in the probit model while only the "no relationship given" variable is significant in the tobit model. In both models, the "no relationship given" variable is significant at the 1% level. These results imply that testators who are more likely to give to individuals outside their immediate family are more likely to give to the poor.

These are the only results that conflict with the predictions of the altruism model presented earlier. This conflict arises because according to the altruism model, gifts to

result is spurious and that there is an omitted variable that is causing some individuals to give more to both these others and to the poor.

The result that people with more grandchildren give more to the poor could easily be explained by age. Although this cannot be tested because of the lack of age data, it corresponds well to the result for widows reporter earlier. Further, modern estimates of giving find that the oldest individuals are the most likely to give (Auten and Joulfaian 1996). In contrast, the positive effects of godchildren, distant relatives, and others defy easy justification.

The first possible explanation for the positive coefficients on close family and others assumes that having more people mentioned in a will causes increased giving to the poor. The most likely explanation for why having more godchildren, distant relatives, and others would *cause* increased giving to the poor is that testators with more friends and distant relatives in their lives have more people to impress in their wills. One clear way to impress these people is to make a charitable contribution. Swinburne (1635) discusses the legal advantages given to charitable giving in wills and makes clear the general societal approval of bequests to the poor. Therefore, people may give to the poor in order to gain the approval or approbation of others and to be remembered as a sympathetic and charitable person. Such a search for approval is suggested in Adam Smith's *Theory of Moral Sentiments* (Smith 1790 see III.2.6) to be one of man's primary motivations.

Were people motivated by a search for admiration from their friends and relatives, individuals with more friends and relatives in their lives, and thus in their wills, would be more likely to do good deeds. One way to model such a decision would follow from a

consisting of those for whom no relationship to the testator is given is the most powerful and significant of these results. This is consistent with a belief that testators care most about the opinion of those most distant from them, or about the opinion of society. It is also consistent with the idea that those who are most distant have the least other relevant information about an individual's character and may therefore be most influenced by public displays of charity.

The second possible explanation for the positive coefficients on grandchildren, close family, and others, is that there is some omitted variable that increases these three measures of people and also increases giving to the poor. What is contained in the error term? What besides wealth, religion, and family structure may influence charitable behavior and would also influence the number of people mentioned in a testator's will? I believe one missing variable is a measure of testator philanthropy -- the testator's love for mankind. Some people's hearts simply bleed more than other people's. Testators who are more philanthropic would care more about the poor and be more likely to give to them. At the same time, testators who were more philanthropic would also care about a wider circle of people in general which would extend not only to the poor, but also to friends, distant relatives, and others. Such an omitted measure which I label "individual philanthropy" or "wideness of circle" could explain the correlation between charitable giving and the numbers of grandchildren, close family members, and others given to. This definition of philanthropy differs from altruism in the following way. Altruism assumes that all testators distribute their assets because they care about others and that all testators distinguish among these different groups of people in the same way. Philanthropy assumes

measure, the correlation in Table 2 is spurious, the numbers of people are correlated with the error term and should be instrumented for.

Another reason to be concerned about the possible endogenity of grandchildren, close family, and others is that the numbers in these groups may be choice variables. For instance, whereas the number of children and marital status are exogenous, the testator chooses whether to include other individuals. However, if these numbers of people are choice variables, the predictions of their effects presented in Table 2 are biased down because the theory that suggests that those who care more about other people would give less to the poor likewise implies that people who care more about the poor would give less to other people. Because of both this and the "wideness of circle" argument, I seek to instrument for other people in the regressions. The wills themselves offer no possible instruments because there is nothing contained in the will that is exogenous to the distribution decision. Therefore, I seek data on the testator's parish of residence as a potential source for instruments.

C. Parish Fixed Effects

Before discussing potential parish level instruments, I turn to the question of whether there are parish level fixed effects influencing the decision to give to the poor. The question at issue is whether there are unobserved attributes of parishes or individuals in them that influence the probability of giving on the part of all people from the same parish. The most likely source of such fixed effects would be the condition or number of poor in the parish or the attitudes of parish civic or religious leaders towards the poor.

the sample from their parish, and all variables which do not vary across individuals -- in this case the constant and the Sudbury dummy variable. (Greene 1993) For parsimony, I also drop the splines on children, money and lands. I also omit individuals who will not be able to be matched to parish level instruments in the next part of the paper. Finally, for computational feasibility, I drop all individuals in parishes from which there are more than nine individuals. This leaves a sample of 907 individuals from 262 different parishes. The variable means for this subsample as well as the results from a Chamberlain fixed effects logit are presented in Table 3.

The significance levels are similar to those in Table 2 as are the signs of the effects. The only variables to exhibit a large change are the preamble variables. This is most likely the result of the fact that the same scribe wrote many wills within a parish and probably suggested similar preambles in all the wills (see Spufford 1971 and Alsop 1989). Therefore, there may be less variation in preambles within a parish then across parishes. This suggests that the results on the preamble variable in Table 2 are driven by across parish variation. The decline of the preamble variable does not lead to the conclusion that religion did not influence giving because the "other religion" variable remains positive and significant and this second religion variable is probably a more valid measure of religiosity.

Finally, I conduct a Hausman test comparing the fixed effect model to a simple logit. The test fails to reject the original model (without fixed effects).[17] Therefore, I assume there are no parish level fixed effects determining giving to the poor and turn to the search for parish level instruments.

dependence on their neighbors and friends for goods and services. Alternately, individuals living in more urban areas may have a larger spectrum of friends.

I find four instruments that are both relevant (correlated with the grandchildren, close family, and other people variables) and exogenous (uncorrelated with the error of the regression determining charitable giving) from the parish data set collected by Greg Clark for his project on the reports of the Charity Commission in England (Clark 1995). The first instrument is parish population in 1801, the second is parish land area in 1841.[18] The other two instruments are both distance variables. The first one is the distance from the parish to the nearest market town in 1600. The second is the distance to the nearest major population center in 1600, where the two population centers are Ipswich and Bury St. Edmunds. Ipswich and Bury St. Edmunds were the two largest cities in Suffolk both in 1801 and in the 17th Century.

Testators from my data set were matched to data from Clark's data set by the parish given in their will. In 1261 cases, individuals were successfully matched.[19] Those who were not matched either did not have a parish mentioned in their will, mentioned a parish that does not exist in the Clark data set, or mentioned a parish with an incomplete set of information. These 1261 testators do not differ in any significant way from the larger sample. The means for the four instruments for the 1261 matched testators are presented at the bottom of Table 1.

In order to allow for the possibility that grandchildren, close family, and other people are endogenous, I add a second reduced form equation that correlates these numbers of other people given to in the will with the exogenous variables from the original

Where b_p* is the unobserved optimal bequest to the poor. Only the indicator variable $Y = \begin{cases} 1 & if\ b_p^* \geq 0 \\ 0 & otherwise \end{cases}$ is observed. X_1 is a subset of exogenous variables measuring testator wealth, religious belief, marital status, number of children, and circumstance. N is a vector of endogenous variables consisting of number of grandchildren, number of close family members, and number of others given gifts in the will. X is a set of exogenous variables including those in X_1 and the four instruments measuring community characteristics -- parish population, parish land area, distance to market 1600, and distance to population center in 1600. e and m are normally distributed errors.

This system of equations states that the decision to give to the poor is determined as before while the numbers of people to give to are determined by the variables determining giving to the poor as well as by the four measures of community characteristics.

A model that combines endogeneity with a binary choice can be estimated using the two stage conditional maximum likelihood estimator (2SCMLE) developed by Rivers and Vuong (1988, for another example of the use of this estimator see Costa 1995). The model is calculated in the following way: First regress the endogenous variables on the exogenous variables including the parish level instruments. Then perform a probit by regressing the binary variable (in this case the giving dummy) on the exogenous variables excluding the instruments and on the residuals from the first stage regressions. This process gives estimates that are strongly consistent and asymptotically normal.[20] The results from using the 2SCMLE estimator are presented in Tables 4 and 5.[21] Table 4

The first stage regression demonstrates that the numbers of people testators give to are related to a number of the exogenous variables. In addition, the instruments perform well -- at least one is significant in each of the three regressions. The second stage probit yields interesting results. The marginal effects from the 2SCMLE model are very close to those from the original probit (although the significance levels are lower in the 2SCMLE, as in most instrumental variables estimates) with some important exceptions; the marginal effects of having a wife decreases and the marginal effect of having children becomes positive. Also, the marginal effect of each additional grandchild and each additional close family member become negative and insignificant while the marginal effect of each additional other person becomes more positive and insignificant.

The 2SCMLE model has an additional advantage in that a Wald test for the exogeneity of the first stage dependent variables is whether the coefficients on the first stage residuals in the second stage equation are equal to zero. I am unable to reject joint exogeneity of these three variables. I even fail to reject the that the coefficients do not equal zero at the 80 percent level. When I test the three variables separately, I similarly find that exogeneity cannot be rejected. Combined these results suggest that endogeneity was not causing the positive coefficients on close family, grandchildren, and others in the original probit. Therefore, the characteristic which I label "wideness of circle" or "individual philanthropy" does not seem to increase both gifts to the poor and gifts to others.

The failure to reject exogeneity implies that I cannot reject that the original model and the positive coefficients on grandchildren, close family, and others were correct. This

Before concluding that the data suggest that religious, altruistic, and selfish motivations influence giving to the poor, I question the role of selection bias in these results.

E. Selection Bias

As noted earlier, only about twenty-five percent of those legally permitted to leave wills chose to do so. In light of this, it is important to question whether selection influences the results reported above and to investigate the decision to write a will. The reasons for dying intestate were probably quite complex, but two main rationales arise. First, because will writing was largely a death bed activity, the circumstances of death probably had quite a large influence on the ability to leave a will. Those who died quickly or accidentally were most likely intestate unless they were in the minority who planned in advance for death. These differences between method of death were probably quite random, or at least unrelated to the decision to give to the poor and thus would not influence the results presented above. The second and more important probable rationale for dying intestate was a general acceptance of the estate division that would arise without a will. This was likely to be influenced by two factors; first by family situation which would determine the result of the application of inheritance law and second by wealth because those with small estates were unlikely to be able to gain enough by altering distribution to rationalize the expense or trouble of a will. Because both family structure and wealth also influence giving to the poor, selection based on these factors could

the chattel (Erickson 1995). These inventories provide detailed information about both the price of specific items and the overall value of chattel. In addition to inventories, there are estate administrations which report who was given control of the division of the estate of intestates. This position was analogous to the role of executor in the case of testators.

Very few inventories have survived for Suffolk or Sudbury from the 1620s and 1630s. However, inventories have survived from other periods in the 17th Century. To look at the will writing decision, I use the complete set of 168 inventories from Suffolk in 1685. (Suffolk Record Office, Ipswich 1685b). These inventories report the total value of chattel. In addition, I am able to link the inventories to the index of Suffolk wills and administrations (Grimwade et al. 1980). From this linkage, I can determine whether an individual left a will or not. Furthermore, from the wills and administrations, I can determine whether an individual was married at the time of death (Suffolk Record Office, Ipswich 1685a and 1685c). For will writers, I mark an individual as married if he mentioned a wife in his will (as above). For the intestate, I mark an individual as married if administration was granted to the "relict" or widow of the deceased. For married testators, inheritance law automatically gave the widow the right to administration. Variable means for the full sample and for testate and intestate individuals separately are presented in Table 6a.[23]

Table 6b presents the results of probit estimation of the will writing decision. Both inventory value (as fraction of median inventory value among will writers) and marital status have significant effects on the probability of writing a will. Notice that these two factors explain 44% of the variation in the will writing decision.

given variable (as a fraction of the median amount given by will writers) coded from the 1357 wills. I then evaluate the CDF of a standard normal at this number. Because inventory value is not recorded in the wills, I use the total monetary gifts because it is the most similar variable that can be determined from the wills. I divide inventory value and monetary gifts by the median among will writers to put both variables on as similar a scale as possible.

Having calculated these propensity scores, I use two different tests to check whether selection may be influencing the results. First, I add the propensity score as an independent variable in the regressions predicting gifts to the poor. Under the null hypothesis that selection does not matter, this score should have no effect on giving. [24] The coefficient on the propensity score is insignificant in both the original probit and the endogeneity corrected model (both t-statistics are around 0.6). Therefore I fail to reject the null. As a second test, I divide the sample by propensity score and only look at the group with scores above two-thirds. These individuals are less likely to be influenced by selection. (The remaining 638 testators have a median propensity score of 84%.) The results for this subsample correspond well to those for the whole sample. In particular, in the original probit other people, grandchildren and family are positive and other people is significant as are the wealth and religion variables. In the 2SCMLE, grandchildren, close family and others maintain their signs and continue to be insignificant. I also still fail to reject the exogeneity of these three variables. The results of these two tests suggest that selection bias is not influencing these results.

of testator utility. However, the finding that individuals who give to a greater number of individuals outside their immediate family are more likely to give to the poor contradicts the simple altruism model. Upon further investigation, I discover that I cannot reject that having more grandchildren, close family members and others to mention in a will causes increased charitable giving. This finding suggests that individuals may be motivated by a quest for approbation from distant relatives and friends when writing their wills.

VI. Implications

The wills used in this paper suggest that in addition to altruism, testators may also be motivated by the desire to garner the approval and approbation of others, particularly non-relatives, when deciding how to divide their estates. This is suggested by the powerful impact of the numbers of individuals beyond the immediate family mentioned in the will on giving behavior. This finding is consistent with Andreoni (1989, 1990), Adam Smith (1790), Becker (1974) and others who suggest that individuals gain a benefit from giving beyond that arising from the increased utility of recipients. Andreoni labels this benefit the "warm glow" of giving.

This research suggests that one way to model the warm glow is as a halo effect. Perhaps it is not that individuals derive utility from the act of giving, but rather that they derive utility from being perceived of as a generous, compassionate, and philanthropic individual. In the case of wills, individuals give to charity in order to influence how they will be remembered. The notion that individuals give in part to influence how they will be

small legacy of 3s 4d to Nicholas his eldest son, and so here declares the reasons for it. The gifts he had formerly given Nicholas, and the money he gained by dealing under his father, raised £100 for him. His father would otherwise have given him £95, and thought it good to have this endorsed on his will to prevent bad and undeserved censures." (Evans 1993, Will 463). John Reeve is obviously quite concerned about how others perceive of him after his death and is well aware of the public nature of his distribution decision.

The importance of appearances to testators may also offer an explanation for the preponderance of equal division in modern wills. In his study using the Estate-Income Tax Match data, Wilhelm (1996) found that 76.6% of estates were divided within 2% of exact equality. While seventeenth century testators give to charity in part to look charitable, modern testators may divide equally in order to look fair. This would occur if fairness to children, like gifts to charity, is an approved of behavior. The notion that equal division was approved of in the seventeenth century also is demonstrated by both John Reeve who feels compelled to explain his treatment of Nicholas and by John Clark who gives his four children equal portions except that his "eldest son John, because he is lame, shall have £4 more than the rest." (Evans 1993, Will 329)

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Table 1:

Descriptive Statistics

	Full Sample 1357 Obs		Suffolk Sample 781 Obs 1620-1624		Sudbury Sample 576 Obs 1636-1638	
Variable	Mean	Std. Dev.	Mean	Std.Dev	Mean	Std.Dev
Amount of Gift to Poor (£)	3.775	4.505	3.802	4.977	3.861	
Dummy=1 if Gift to Poor	.242	.429	.233	.423	.255	.436
Dummy=1 if No Religious Preamble	.028	.165	.027	.162	.030	.169
Dummy=1 if Religious Preamble Intensity 1	.171	.377	.159	.366	.188	.391
Dummy=1 if Religious Preamble Intensity 2***	.438	.496	.357	.479	.549	.498
Dummy=1 if Religious Preamble Intensity 3***	.175	.380	.245	.430	.080	.271
Dummy=1 if Religious Preamble Intensity 4***	.055	.229	.072	.258	.033	.179
Dummy=1 if Religion Outside of Preamble	.107	.309	.115	.320	.095	.294
Dummy=1 if Yeoman	.303	.460	.293	.456	.316	.465
Dummy=1 if Skilled Craft Worker**	.141	.349	.123	.329	.167	.373
Dummy=1 if Shopkeeper	.040	.196	.044	.204	.035	.183
Dummy=1 if Husbandman	.292	.091 .287		.088 .284		.094
Dummy=1 if Less Skilled Worker	.032	.177	.028	.166	.038	.192
Dummy=1 if Widow	.166	.372	.160	.367	.174	.379
Dummy=1 if No Occupation Given***	.227	.419	.264	.441	.177	.382
Dummy=1 if Could Sign Written Will***	.382	.456	.449	.498	.290	.454
Dummy=1 if Could Not Sign Written Will***	.486	.500	.410	.492	.589	.493
Dummy=1 if Will is Spoken (Nuncupative)	.133	.339	.141	.348	.122	.327
Dummy=1 if Servants in Household	.087	.282	.092	.290	.080	.271
Total Amount of Money Bequeathed (£)	73.889	164.498	73.063	157.641	75.008	173.497
Number of Parcels of Land Bequeathed*	1.419	2.511	1.521	2.795	1.280	2.058
Number of Houses Bequeathed*	1.105	1.700	1.181	1.915	1.002	1.351
Dummy=1 if Married	.560	.497	.558	.497	.563	.497
Number of Children**	2.499	2.307	2.371	2.207	2.672	2.426

Notes: The symbols *,**, and *** indicate that the means for Suffolk and Sudbury are different from each other at the 10%, 5% and 1% level, respectively. Time between will and probate is only calculated in 731 cases in Suffolk and 562 cases in Sudbury where time between will writing and probate is known. Parish variables are only calculated in 746 cases in Suffolk and 515 cases in Sudbury where parish is known.

Table 2:

Probit and Tobit Maximum Likelihood Estimates

	Probit Model 1357 Observations Dependent Variable: Dummy=1 if Gift to Poor Mean=.242 Std.Dev.=.429			Tobit Model 1357 Observations Dependent Variable: Amount of Gift to Poor (£) Mean=.802 Std.Dev.=4.505	
Variable	Est.	Std. Err.	Marg. Effect	Est.	Std.Err
Intercept	-1.388***	.213	-.349	-12.481***	1.761
Dummy=1 if No Religious Preamble	-1.344***	.434	-.338	-8.620***	3.330
Dummy=1 if Religious Preamble Intensity 1	-.127	.128	-.032	-.827	1.036
Dummy=1 if Religious Preamble Intensity 3	.009	.126	.002	-.160	.960
Dummy=1 if Religious Preamble Intensity 4	.300	.189	.075	1.795	1.352
Dummy=1 if Religion Outside of Preamble	.868***	.137	.218	4.329***	.951
Dummy=1 if Yeoman	.528***	.157	.133	3.057**	1.297
Dummy=1 if Shopkeeper	.476*	.255	.120	2.023	2.032
Dummy=1 if Husbandman	-.153	.243	-.039	-1.500	2.054
Dummy=1 if Less Skilled Worker	.380	.292	.096	2.004	2.400
Dummy=1 if Widow	.351*	.199	.088	2.325	1.628
Dummy=1 if No Occupation Given	.165	.173	.042	2.176	1.409
Dummy=1 if Could Not Sign Written Will	-.363***	.102	-.091	-2.343***	.795
Dummy=1 if Will is Spoken (Nuncupative)	-.967***	.239	-.243	-7.412***	2.009
Dummy=1 if Servants in Household	.770***	.151	.194	3.457***	1.026
Total Amount of Money Bequeathed (£)	.007***	.002	.002	.053***	.016
Spline at Money Bequeathed Equals 70£	-.007***	.002	-.002	.044***	.016
Number of Parcels of Land Bequeathed	.111**	.052	.028	.664*	.390
Spline at Land Bequeathed Equals 3 Parcels	-.100	.065	-.025	-.482	.436
Number of Houses Bequeathed	.064	.040	.016	.340	.263

Restricted Log-Likelihood	-751.620

Notes: The omitted dummies are Religious Preamble Intensity 2, Literate, and skilled craft workers. Because the Nuncupative wills lack preambles, the coefficient for the nuncupative variable is a comparison with a literate individual with an intensity two preamble. Marginal effects in the probate are evaluated at the sample means. The symbols *,**, and *** indicate that the coefficient is significantly different from zero at the 10%, 5% and 1% level, respectively.

Table 3:

Chamberlain Fixed Effects Logit
(Parish Level Fixed Effects)

907 Observations
Dependent Variable: Giving Dummy
Mean= .249 St.Dev=.433

Variable	Est.	Std. Err.	Variable Mean
Dummy=1 if No Religious Preamble	-2.786	3.236	.018
Dummy=1 if Religious Preamble Intensity 1	-.133	.433	.154
Dummy=1 if Religious Preamble Intensity 3	-.577	.390	.186
Dummy=1 if Religious Preamble Intensity 4	.041	.706	.058
Dummy=1 if Religion Outside of Preamble	.825*	.461	.114
Dummy=1 if Yeoman	1.301**	.511	.332
Dummy=1 if Shopkeeper	1.123	.881	.028
Dummy=1 if Husbandman	-.306	.721	.101
Dummy=1 if Less Skilled Worker	.739	1.160	.032
Dummy=1 if Widow	.886*	.614	.159
Dummy=1 if No Occupation Given	.328	.573	.213
Dummy=1 if Could Not Sign Written Will	-.935**	.366	.482
Dummy=1 if Will is Spoken (Nuncupative)	-1.703**	.849	.127
Dummy=1 if Servants in Household	1.622***	.510	.094
Total Amount of Money Bequeathed (£)	.005***	.002	74.559
Number of Parcels of Land Bequeathed	.150	.104	1.526
Number of Houses Bequeathed	-.001	.138	1.157
Dummy=1 if Married	.177	.387	.583
Number of Children	-.140*	.078	2.534
Number of Grandchildren	.113**	.055	1.226
Number of Other Close Family Members	.195	.127	.793

Table 4:

First State Regression of Two Stage Conditional Maximum Likelihood Estimator
Regression of Endogenous Variables on Exogenous Variables Including Instruments

	Grandchildren		Close Family Members		Other People	
	Mean=1.109 St.Dev=2.685		Mean=.799 St.Dev=1.462		Mean=2.327 St.Dev=5.147	
	1261 Observations		1261 Observations		1261 Observations	
Variable	Est.	Std. Err.	Est.	Std.Err.	Est.	Std.Err
Intercept	-.637*	.352	1.543***	.221	3.676***	.577
Dummy=1 if No Religious Preamble	-.279	.346	-.108	.268	.103	.927
Dummy=1 if Religious Preamble Intensity 1	-.549***	.184	-.097	.092	.249	.368
Dummy=1 if Religious Preamble Intensity 3	-.319	.203	-.271***	.095	.220	.356
Dummy=1 if Religious Preamble Intensity 4	.557	.420	-.162	.180	.187	.507
Dummy=1 if Religion Outside of Preamble	.409	.345	.221	.150	1.069**	.485
Dummy=1 if Yeoman	.441**	.193	-.149	.104	.160	.336
Dummy=1 if Shopkeeper	.269	.369	.054	.187	.131	.482
Dummy=1 if Husbandman	-.194	.174	-.068	.111	.281	.324
Dummy=1 if Less Skilled Worker	-.259	.235	.068	.195	-.687*	.388
Dummy=1 if Widow	1.374***	.318	-.384***	.129	.719	.525
Dummy=1 if No Occupation Given	-.059	.175	.266**	.123	.697*	.373
Dummy=1 if Could Not Sign Written Will	.475***	.160	-.161*	.082	.575**	.271
Dummy=1 if Will is Spoken (Nuncupative)	-.084	.196	-.644***	.123	-1.491***	.397
Dummy=1 if Servants in Household	.474	.313	.008	.153	1.563**	.612
Total Amount of Money Bequeathed (£)	.014***	.003	.012***	.002	.044***	.006
Spline at Money Bequeathed Equals 70£	-.014***	.004	-.011***	.002	-.042***	.007
Number of Parcels of Land Bequeathed	-.080	.081	.022	.044	-.133	.147
Spline at Land Bequeathed Equals 3 Parcels	.042	.090	-.029	.052	.175	.181
Number of Houses Bequeathed	.034	.061	.063*	.036	.099	.131
Dummy=1 if Married	-.741***	.181	-.720***	.096	-1.336***	.297
Number of Children	.546***	.084	-.404***	.051	-2.381***	.190

Notes: The omitted dummies are Religious Preamble Intensity 2, Literate, and skilled craft workers. Because the Nuncupative wills lack preambles, the coefficient for the nuncupative variable is a comparison with a literate individual with an intensity two preamble. Marginal effects in the probit are evaluated at the sample means. The symbols *,**, and *** indicate that the coefficient is significantly different from zero at the 10%, 5% and 1% level, respectively.

Table 5:

Second State Regression of Two Stage Conditional Maximum Likelihood Estimator
Regression of Giving Dummy on Exogenous Variables Excluding Instruments and First Stage Errors

Dependent Variable: Giving Dummy
Mean=.246 Std. Error=.431
1261 Observations

Variable	Est.	Std. Err.	Marg. Effect
Intercept	-1.442	.974	-.367
Dummy=1 if No Religious Preamble	-1.456**	.714	-.371
Dummy=1 if Religious Preamble Intensity 1	-.320	.432	-.081
Dummy=1 if Religious Preamble Intensity 3	-.265	.550	-.067
Dummy=1 if Religious Preamble Intensity 4	.237	.314	.060
Dummy=1 if Religion Outside of Preamble	.813***	.240	.207
Dummy=1 if Yeoman	.442	.269	.113
Dummy=1 if Shopkeeper	.576	.357	.147
Dummy=1 if Husbandman	-.290	.389	-.074
Dummy=1 if Less Skilled Worker	.535	.333	.136
Dummy=1 if Widow	.167	.611	.043
Dummy=1 if No Occupation Given	.117	.132	.030
Dummy=1 if Could Not Sign Written Will	-.459*	.274	-.117
Dummy=1 if Will is Spoken (Nuncupative)	-.995***	.304	-.254
Dummy=1 if Servants in Household	.518	.481	.132
Total Amount of Money Bequeathed (£)	.007	.010	.002
Spline at Money Bequeathed Equals 70£	-.007	.010	-.002
Number of Parcels of Land Bequeathed	.132**	.060	.034
Spline at Land Bequeathed Equals 3 Parcels	-.149	.110	-.038
Number of Houses Bequeathed	.083	.071	.021
Dummy=1 if Married	-.346	.885	-.088
Number of Children	.115	.691	.029
Spline at Children Equals 2	-.131	.655	-.033
Number of Grandchildren	-.112	.614	-.029
Number of Other Close Family Members	-.415	1.133	-.106
Number of Other People	.232	.351	.059

indicate that the coefficient is significantly different from zero at the 10%, 5% and 1% level, respectively. Standard errors are created by bootstrapping.

Table 6a:

Descriptive Statistic from Probate Inventories, 1686

	Full Sample 168 Observations		Intestate 60 Observations		Testator 108 Observations	
Variable	Mean	St.Dev.	Mean	St.Dev	Mean	St.Dev
Dummy=1 if Individual Wrote a Will***	.643	.481	.000	0.000	1.000	0.000
Dummy=1 If Individual Was Married*	.560	.498	.650	.481	.509	.502
Inventory Value As a Fraction of Median** Value Among Will Writers	1.593	2.282	1.023	1.342	1.909	2.617

Notes: The symbols *,**, and *** indicate that the means for intestate individuals and testators are different from each other at the 10%, 5% and 1% level, respectively.

Table 6b:

Results from Probit Maximum Likelihood Estimation

Dependent Variable: Dummy for Will Writing
Mean=.643 St.Dev=.481
168 Observations

Variable	Est.	Std.Error	Marginal Effect	
Intercept	.390**	.168	.143	
Dummy=1 If Individual Was Married	-.477**	.212	-.175	
Inventory Value As a Fraction of Median Value Among Will Writers	.182***	.070	.067	
Pseudo R-Squared	.437			
Log-Likelihood	-103.210			
Adjusted Log-Likelihood	-109.495			